

CONTENTS

The effect of oxidation on fatigue crack growth in 2.25Cr-1Mo steel at 525 °C: A metallographic examination	1
K. D. Challenger (Monterey, CA, U.S.A.), R. P. Skelton (Surrey, U.K.) and J. S. Kamen (Monterey, CA, U.S.A.)	
Probabilistic aspects of the strength of fiber-dominated short-fiber composites I: Aligned fibers	7
R. C. Wetherhold (Buffalo, NY, U.S.A.)	
Probabilistic aspects of the strength of fiber-dominated short-fiber composites II: Biased fiber distribution	13
R. C. Wetherhold (Buffalo, NY, U.S.A.)	
Fracture mechanisms in Cu-O and Cu-Pb alloys fatigued with a positive mean stress	19
R. Eckert, C. Laird and J. L. Bassani (Philadelphia, PA, U.S.A.)	
Effect of the welding process and heat input on the fracture toughness of welded joints in high strength low alloy steel	29
P. Sundaram, R. K. Pandey and A. N. Kumar (New Delhi, India)	
Influence of the martensite content on the fatigue behaviour of a dual-phase steel	39
W. Zhongguang, W. Guonan, K. Wei and H. Haicai (Shenyang, China)	
The effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C	45
D. J. Gooch (Surrey, U.K.)	
Crystallographic texture, anisotropic yield surfaces and forming limits of sheet metals	55
F. Barlat (Alcoa Center, PA, U.S.A.)	
Low cycle fatigue behaviour of a cryogenic Fe-30Mn-5Al-0.1Nb-0.3C steel	73
J. K. Han and Y. G. Kim (Seoul, South Korea)	
Mechanism of fracture produced by fatigue cycling with a positive mean stress in copper	81
R. Eckert, C. Laird and J. Bassani (Philadelphia, PA, U.S.A.)	
Corrosion behavior of sensitized austenitic (AISI 304) stainless steel in a CO ₂ atmosphere	89
S. K. Putatunda (Detroit, MI, U.S.A.)	
Effect of the nitrogen-to-hydrogen ratio on the mechanical behavior of vanadium, niobium and tantalum.	97
W. A. Spitzig and C. V. Owen (Ames, IA, U.S.A.)	
The effect of aging on the yield stress of a single-crystal superalloy	105
A. A. Hopgood and J. W. Martin (Oxford, U.K.)	
The dislocation structure in beryllium single-crystals deformed by prismatic slip	111
S. Jönsson and J. Beuers (Stuttgart, F.R.G.)	
Fatigue crack initiation and propagation in AISI 4130 steel exposed to neutral perchlorate solution	125
Z. Y. Zhu, G. C. Farrington and C. Laird (Philadelphia, PA, U.S.A.)	
Influence of dynamic strain aging on the creep ductility of solid solution alloys	137
S. I. Hong (Philadelphia, PA, U.S.A.)	
Plastic deformation in B.C.C. alloys induced by hydrogen concentration gradients.	143
M. E. Armacanqui and R. A. Oriani (Minneapolis, MN, U.S.A.)	
The generation of thermal stress and strain during the quenching of steel plates in polyalkylene glycol	153
A. J. Fletcher and A. B. Soomro (Sheffield, U.K.)	
Transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy	161
S. C. Tjong and N. J. Ho (Kaohsiung, Taiwan)	
A comprehensive analysis of the static indentation process	169
Y. Tirupataiah and G. Sundararajan (Hyderabad, India)	
Low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: Effects of manganese and interstitial carbon and nitrogen	181
E. R. Jones, Jr., T. Datta, C. Almasan, D. Edwards (Columbia, SC, U.S.A.) and H. M. Ledbetter (Boulder, CO, U.S.A.)	
An investigation of phase transformation in a 50.8at.%Ni-Ti shape memory alloy	189
L. Zuemin and T. Y. Hsu (Xu Zuyao) (Shanghai, China)	
Thermal contraction stresses in cemented tungsten carbide composites	195
C. M. Sayers (Bath, U.K.)	

(continued on inside back cover)

CONTENTS (continued)

Microstructural characterization of rapidly solidified aluminium-transition metal alloys	201
J. M. Sater, S. C. Jha and T. H. Sanders, Jr. (West Lafayette, IN, U.S.A.)	
On the transition from a waveless to a wavy interface in explosive welding	217
D. Jaramillo, V. A. Azecket and O. T. Inal (Socorro, NM, U.S.A.)	
Effects of molybdenum, titanium and silicon additions on the $D0_3 \rightleftharpoons B2$ transition temperature for alloys near Fe_3Al	223
R. T. Fortnum and D. E. Mikkola (Houghton, MI, U.S.A.)	
Dissolution of comminuted magnesium oxide as affected by the density of dislocations introduced by various comminution methods	233
N. F. Albanese-Kotar and D. E. Mikkola (Houghton, MI, U.S.A.)	
Dissolution of comminuted magnesium oxide as affected by the density of dislocations introduced by various comminution methods	233
N. F. Albanese-Kotar and D. E. Mikkola (Houghton, MI, U.S.A.)	
Elemental analysis of Swedish nuclear waste glasses:	
Leachability vs. composition	241
D. E. Clark (Gainesville, FL, U.S.A.), A. Lodding, H. Odelius (Gothenburg, Sweden) and L. O. Werme (Stockholm, Sweden)	
The erosion of Abresist	257
M. K. Aghajamian, E. Breval, J. S. Jennings and N. H. MacMillan (University Park, PA, U.S.A.)	
BOOK REVIEWS	265
CONFERENCE CALENDAR	269
LETTERS	
Auger electron spectroscopy of anodic oxide films on nickel-copper alloys	L1
R. D. K. Misra (Hyderabad, India)	
Estimation of monocrystal elastic constants for an alloy of a cubisolvant and an hexagonal solute	L5
D. J. B. Cohen and Y. M. Koo (Evanston, IL, U.S.A.)	
Plasma-induced erosion of monocrystalline alloy surfaces	L9
M. Rubel (Stockholm, Sweden)	
Plasma sprayed superconducting oxides	L13
R. A. Neiser (Stony Brook, NY, and Landover, MD, U.S.A.), J. P. Kirkland (Landover, MD, U.S.A.), H. Herman (Stony Brook, NY, U.S.A.), W. T. Elam and E. F. Skelton (Washington, DC, U.S.A.)	
AUTHOR INDEX	275
SUBJECT INDEX	277

